edema from presumed catheter irritation and (4) calculus encrustation in the catheter.

A potential problem of this procedure might be erosion of the collecting system by a stiff catheter. It is therefore mandatory to check the position of the catheter to ensure that the tip is not abutting against a wall. Soft catheter material should be used as early as possible.

Infection within the perirenal space and catheter tract is also a potential hazard. We have not had this complication arise, although we have maintained patients on antibiotic coverage. However, in patients who initially had infected urine this complication has not developed.

Proposed contraindications would be the presence of renal neoplasm or renal tuberculosis. Hemorrhagic diathesis would also be considered a contraindication.

The technique is suitable for patients who are not surgical candidates for any reason. It may also be used as a temporizing treatment to buy time when other approaches are hazardous or before a more complex or definitive procedure can be carried out.

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Lactose-Barium Study as a Screening Test for Lactase Deficiency

INTESTINAL LACTASE DEFICIENCY is a condition in which there are low levels of lactase in the small bowel mucosa. This makes it difficult for lactose to be digested, a commonly occurring disaccharide.

Since the original description of the use of a lactose-barium mixture for the diagnosis of intestinal lactase deficiency, several studies have assessed its accuracy. Recently, Morrison and coworkers found that this radiographic procedure was 90 percent accurate in predicting lactase deficiency. Therefore, this simple test is an excellent screening procedure for discovering patients with low lactase levels. While many people with lactase deficiency are asymptomatic, there are also those with vague abdominal complaints who are unaware that their symptoms are related to lactose ingestion. By the routine use of a lactose-barium mixture, a radiologist may make the diagnosis of lactase deficiency which was unsuspected by both the patient and clinician. The radiographic features of the condition have been well described and consist of (1) rapid transit of the lactose-barium mixture through the small intestine, (2) dilatation of the small bowel and (3) dilution of the lactose-barium mixture in the small intestine.

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Lymphographic Patterns in Lymphoma

CERTAIN HISTOLOGICAL subtypes of lymphoma present a typical lymphographic appearance. Therefore, non-Hodgkin's lymphoma of the poorly or well-differentiated lymphocytic types—or of the mixed lymphocytic-histiocytic type (the old lymphosarcoma group)—characteristically present a homogeneous lymphographic picture. All or almost all of the visualized nodes are involved and show a similar pattern and degree of abnormality. Sharply defined intranodal filling defects are uncommon.

In contrast, Hodgkin's disease of the nodular sclerosis or of the mixed cellularity type shows a nonhomogeneous overall appearance on the lymphangiogram. Only some of the nodes are abnormal. The degree of nodal abnormality varies and well marginated filling defects are frequent. Lymph stasis is most often evident in this group.

Hodgkin's disease of the lymphocytic predominant type resembles the pattern of lymphosarcoma except that filling defects may occur. Non-Hodgkin's disease of the histiocytic type (reticulum cell sarcoma) is lymphographically similar to Hodgkin's disease of the nodular sclerosis type, but lymph stasis is less frequent.

In experienced hands, the lymphangiogram is more than 90 percent accurate in the diagnosis of lymphomatous involvement of visualized retro-

peritoneal lymph nodes. The majority of errors are of the false-positive type and are caused by benign reactive changes such as fibrosis, sinus histiocytosis and follicular hyperplasia, which distort the internal nodal architecture. Such changes are relatively common in patients with lymphoma. Therefore, although characteristic findings on the lymphangiogram do suggest a specific histiopathologic diagnosis, biopsy and other clinical investigations remain necessary for patient management.

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Methods for Acceleration of Small Intestinal Radiographic Examination

BECAUSE OF THE normal variation in transit time of barium through the small intestine, it often requires several hours for completion of this study. Numerous methods have been suggested for accelerating barium transit. These have included using a larger volume of barium, placing the patient in the right lateral decubitus position during the examination, using cold barium and giving pharmacologic agents including neostigmine or metoclopramide.

In a study in which three methods were compared with a control study in each of 20 volunteers, the addition of 10 ml of Gastrografin® (meglumine diatrizoate [66 percent] and sodium diatrizoate [10 percent]) to the barium mixture proved to be the best method for acceleration of small bowel transit of barium. The other methods used were the subcutaneous injection of 0.5 mg of neostigmine and placing the patient in the right lateral decubitus position during the examination. The average transit time in the control study was one hour (with a range of 15 minutes to three hours), while the average transit time using 10 ml of Gastrografin added to the barium was 33 minutes (with a range of 15 to 45 minutes). Therefore, the addition of 10 ml of Gastrografin to the barium provides a simple method for faster and more efficient radiographic examination of the small intestine.

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Bifid Ureter with Blind-ending Branch —the Radiologist's Role in Diagnosis

A BIFID URETER with one blind-ending branch is a rare congenital anomaly. These have the same histologic layers in their wall as the normal ureter and are not acquired ureteral diverticula.

There are two types of this anomaly which presumably represent abortive attempts at ureteral duplication from an accessory ureteral bud of the wolffian duct. They most commonly arise from the pelvic portion of the ureter and extend cephalad. The more common type is short and ends below the inlet of the pelvis. The second type is a longer blind portion which has a bulbous proximal dilatation. The latter usually has a small cap of nephrogenic tissue associated with it without any continuous connection. The nephrogenic tissue may be seen to "blush," especially when laminagraphs are obtained.

The distal segment usually joins with the accompanying ureter, although occasionally they may insert separately into the bladder or into an ectopic location.

The symptoms which are produced include flank pain, dysuria, fever and hematuria and are usually related to some complication involving the blind-ending segment. These complications range from reflux, infection, calculus formation within the blind portion and uroepithelial tumor. In addition, they may produce obstruction to the normal adjacent ureter and lead to secondary obstructive changes in the ipsilateral kidney.

The differential diagnosis of such a finding is an acquired diverticula which histologically lacks the full wall layers, a blind-ending stump post